

## ABSTRACT OF THE DISCLOSURE

A light source unit includes a light source having LED chips for emitting different colors of light and an optical sensor for detecting light from a light mixer. A light source control section controls by feedback control luminance of each of the LED chips according to values detected by the optical sensor. The light source unit also includes a temperature control section for controlling the temperature of the light source. The temperature control section is a feedback control system. Keeping the light source at a constant temperature allows suppressing spectrum changes of the LED chips with temperature, thereby suppressing changes in the luminance and chromaticity of the light source unit.